

WHAT IS CLAIMED IS:

1. A center-electrode assembly comprising:

a ferrite;

center-electrode patterns and insulating films deposited on the top surface of the ferrite;

a conductive pattern formed on the bottom surface of the ferrite; and

connecting electrodes formed at margins of the ferrite electrically connecting between the center-electrode patterns deposited on the top surface and the conductive pattern formed on the bottom surface.

2. A nonreciprocal circuit device comprising:

a permanent magnet;

a center-electrode assembly according to Claim 1 to which a direct-current magnetic field is applied by the permanent magnet; and

a metallic case accommodating the permanent magnet and the center-electrode assembly.

3. A communication apparatus comprising a nonreciprocal circuit device according to Claim 2, and connected thereto, at least one of a transmitting circuit and a reception circuit.

4. A communication apparatus comprising a center-electrode assembly according to Claim 1, and connected thereto, at least one of a transmission circuit and a reception circuit.

5. A method for manufacturing a center-electrode assembly comprising the steps of:
forming through-holes in a ferrite mother board;
alternately depositing a center-electrode pattern and an insulating film on the top surface
of the ferrite mother board, and forming a conductive pattern on the back surface of the ferrite
mother board; and
cutting a center-electrode assembly from the ferrite mother board by cutting the ferrite
mother board at intervals of a predetermined size, the center-electrode patterns formed on the top
surface and the conductive pattern formed on the back surface being electrically connected via
connecting electrodes formed in the through-holes in the center-electrode assembly.

Concluded
B1
5

10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75
76
77
78
79
80
81
82
83
84
85
86
87
88
89
90
91
92
93
94
95
96
97
98
99
100

add
A2